

Remarks

Reconsideration of the application is respectfully requested. Claim 1 was rejected under Section 112. Claim 1 has now been amended and should be in full conformance with  
5 the requirements of Section 112. No new matter has been added. Support may, for example, be found in paragraph 0045 of the corresponding published patent application no. US 2006/0213629 and Fig. 1.

Claims 1-10 were rejected under Section 103 as being  
10 obvious over Cael in view of Marzolini and Snekenes. This rejection is respectfully traversed. No new matter has been added to the amended claims.

Claim 1 has been amended to clarify that the drained acidic fluid is recycled directly back to the acid treatment  
15 device without adding or removing any substances from the drained acidic fluid. The absence of any addition or removal of substances from the acidic fluid prior to recycling is shown in Fig. 1 and described in paragraph 0045. The only "treatment" of the drained acidic fluid is that it is passed  
20 through a heat exchanger but no exchange of fluids takes place.

In the previous response, filed 4 March 2008, applicants argued that it would defeat the purpose of Cael to first remove the non-cellulosic material (i.e. lignin) and  
25 then add it back again to the pulp in order to recycle monopersulfate. It is the Examiner's position (Office action, page 9, lines 9-10) that the components such as lignin would

still be removed during a later extraction during kraft-pulping if recycling of monopersulfate was performed and that it therefore would be obvious to recycle monopersulfate in Cael. Applicants respectfully disagree.

5           Applicants maintain that it would not be obvious to first separate the non-cellulosic materials (lignin) from the lignocellulosic materials by using monoperoxysulfate, as taught by Cael, and then add back both the lignin and the monoperoxysulfate again in order to recycle the  
10       monopersulfate, as taught by Marzolini, even if the lignin is extracted later in the pulping process. It is submitted to be contrary to the teachings of Cael to add back lignin to the chips slurry which is the very substance Cael wants to remove from the chips slurry. It is submitted that Cael is teaching  
15       away from adding the withdrawn lignin back to the process and that a skilled person in the art of pulping knows it is undesirable to add back lignin to the chips slurry due to the detrimental effects of lignin on the quality of the finished paper/pulping product.

20           Assuming that the artisan wants to recycle the monoperoxysulfate, the lignin would first be removed from the monopersulfate before the monopersulfate is recycled back to the chips slurry. This means the lignin would be removed from the monoperoxysulfate prior to recycling the monoperoxysulfate  
25       which is contrary to the amended claim 1 that requires that no substance is removed from or added to the drained acidic

fluid.

It is submitted that the constructed extra steps are based on a hindsight analysis and that it would not be obvious to first separate and remove the non-cellulosic materials (lignin) and then directly add back the non-cellulosic materials (even if it saves on the monoperoxysulfate) due to the detrimental effects of lignin on the final pulping/paper products. This explains why Cael teaches (see col. 2, line 22) that the pretreatment liquor is drained away i.e. discarded. There is thus no teaching or suggestion of adding back the detrimental lignin together with the monoperoxysulfate to the process.

In other words, the skilled person would not recycle an acidic solution that includes dissolved non-cellulosic materials (lignin) and hope that the amount of non-cellulosic materials in the chips would later decrease when treated in an acidic solution laden with the very same undesirable non-cellulosic materials (lignin).

It is therefore submitted that it would not be obvious to combine Cael, Marzolini and Snekenes as suggested because the recycling of the non-cellulosic materials back to Cael's acid treatment device would make Cael's process less effective and would be contrary to the main objective of Cael to remove the lignin from the process and not add it back.

In view of the above, it is submitted that the amended claim 1 is allowable over the cited references.

Claims 2-10 are submitted to be allowable because they depend upon the allowable base claim 1 and because each claim includes limitations that are not taught or suggested in the cited references.

5           Claim 11 was rejected under Section 103 as being obvious over Cael in view of Marzolini and Snekenes and further in view of Grace. This rejection is respectfully traversed.

10           Claim 11 is submitted to be allowable because it depends upon the allowable base claim 1 and because the claim includes limitations that are not taught or suggested in the cited references.

15           Claim 12 was rejected under Section 103 as being obvious over Cael in view of Marzolini and Snekenes and further in view of Metso valve document. This rejection is respectfully traversed.

20           Claim 12 is submitted to be allowable because it depends upon the allowable base claim 1 and because the claim includes limitations that are not taught or suggested in the cited references.

The application is now submitted to be in condition  
for allowance, and such action is respectfully requested.

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Respectfully submitted,

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